

*"When the well's dry,
we know the
worth of water."
~Benjamin Franklin*

*"It is a fascinating and
provocative thought that a
body of water deserves to be
considered as an organism in
its own right."
~ Lyall Watson*

*"Aquifer: a mysterious, magical and
poorly defined area beneath the
surface of the earth that either yields
or withholds vast or lesser quantities
of standing/flowing water, the
quantity and/or quality of which is
dependent on who is describing it or
how much money may be at stake."
~R. Radden*

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Alamosa/Monte Vista National Wildlife Refuges

Living with Drought



Water of the San Luis Valley

The San Luis Valley of south central Colorado sits at a soaring 7800 feet above sea level. The Valley extends over 80 miles from north to south and 50 miles from east to west, with dwarfing mountains in three directions.

Water is the lifeblood of the San Luis Valley. While only an average of 7 inches of precipitation falls per year, the surrounding mountains feed the arid valley with precious surface water, as well as replenish an expansive underground reservoir. All life (human and wild) hangs in the balance of this natural cycle.

The San Luis Basin has received only 58% of normal precipitation as of May 2003. Below average precipitation for many years has resulted in a severe Valley-wide drought. In this time of drought, water becomes even more important to people and wildlife.

At the National Wildlife Refuges we are doing our part to conserve Valley water.

Drought Conditions

Refuges Conserving Water

Farming Practices

- We reduced the farm crops we irrigate by not using end guns on center pivot sprinklers.
- We will irrigate only half of our water-needy alfalfa fields, which are a part of our crop rotation.
- We drastically reduced the amount of water pumped from wells on the Monte Vista NWR. Valley aquifers are extremely depleted, our pumping conservation reduces costs as well as contributes to the long-term rejuvenation of Valley aquifers.

Water Management

“Any river is really the summation of the whole valley. To think it as nothing but water is to ignore the greater part.”
Hall Borland

Refuge Management in Times of Drought

The Refuges are taking advantage of dry conditions to address some challenges associated with wetland management.

- Repair infrastructure (water control structures, ditches and dikes) that is inaccessible in wet years.
- **Dry wetlands (the Auto Tour route) to recycle nutrients that have been bound in stagnant water for many years.**
- Take advantage of the ability to promote annual plants, like pig weed and smartweed, which produce seeds birds like to eat.
- Stress noxious weeds.

Wildlife

During drought, inadequate habitat is the biggest concern for wetland-dependent wildlife. It affects the time wildlife spend in the San Luis Valley, whether they have enough food, and whether they breed and raise young.

In the San Luis Valley we are likely to see a reduction in waterfowl production, fewer birds in the valley overall, and migrating water birds concentrated in a few wet areas. Which can make for better wildlife viewing.

Breeding Birds

Breeding season on the Refuges is initiated by plentiful spring water sources and sustained by continued summer water. This year, we reduced spring water levels in hope of discouraging birds from starting nests that will not be able to be sustained.

Monte Vista National Wildlife Refuge boasts of some of the highest duck nesting densities in the country. In 2002, duck production was 27% of average, and expected to be as poor as in 2003 because of dry conditions.

Parker Pond on Monte Vista National Wildlife Refuge is an important nesting area for Snowy Egrets, Black-crowned Night Herons, and White-faced Ibis. It will be dry this year, to mitigate this we are working with other Valley wetland managers to insure there are some pockets of breeding habitat for these birds.

Migrating Birds

Migrating Sandhill Cranes and waterfowl depend on the San Luis Valley for plentiful agricultural fields close to wetlands. Because of the dry conditions, birds tend to be concentrated on the Refuges and can become more susceptible to disease. To help disperse birds, we are working with private landowners to provide widespread roosting and feeding habitats.

Wildlife populations naturally fluctuate, and drought is one mechanism that leads to natural declines. Although this can be healthy for populations hopefully the drought is short-term for both wildlife and humans of the Valley.